PC Oscilloscope
Spectrum Analyzer
Logic Analyzer
DSO-50x12 Series
User's Manual

Revision Ⅱ

Software Win 7/2000/xp/Vista Version

CLOCK COMPUTER CORP.
http://www.clock-link.com.tw

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(DSO-50212, DSO-50412)
Software Win 7/2000/xp/Vista Version

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Accessories Contents

- The DSO-50x12 Series Aluminum unit.
- Logic Analyzer Pod.
- Two pieces (DSO-50212 Series) or Four pieces (DSO-50412).
  calibrated 300MHz Probe with (x1, x10). 10pF input Capacitance.
- Housing with twenty piece color wires and easy hook clips.
- USB 2.0 cable.
- Universal Power Supply with DC Adapter **12V/1A** (DSO-50212), **12V/2A** (DSO-50412).
- DSO-50x12 Series User's Manual.
- Control Software CD.

System Requirements

In order to use the DSO50x12, the following equipment is necessary:

- **Computer System:** Pentium PC system with at least one USB interface (USB 1.1 or 2.0 version).
- **Memory:** A minimum of 256 MB free RAM. 512 MB or 1GB is better.
- **Mass Storage:** At least one CD drives and hard disk drives.
- **Monitor:** Any monitor compatible with the above display adapter.
- **Operation System:** Windows 2000/XP/VISTA.

Installing Hardware

- Connects USB cable to DSO.
- Setup USB driver from CD.
- Plug in power source from +12V DC Adapter.
- Waiting for control software turn on.

Installing Software

- Insert the distribution CD into drive E: (here E: is CD driver).
- Enter file to run E:\DSO50x12\dso50x12.exe.
- Follow the on screen instructions.

Feature

- Innovative cross triggering: logic analyzer channels can trigger the analog channels and vice versa.
- Long time pre-triggering up to 262143*256 points, about -67M points.
- Fast data capture and screen update rates.
- Hot key function that is convenient to use.
- Deep 512K/2M sample data acquisition buffers on each channel (A1, A2, A3, A4, D0 ~ D11).
- Precision 200MHz Frequency counter, up to 7 digital resolution @ 512K memory for each analog channel.
- Advance Fast Fourier Transformations function to Bandwidth test.
- Support Pulse width and TV(NTSC525, PAL625) Triggering and count.
- Support high speed (up to 50MHz SCL clock) I²C , SPI Triggering.
- Support I²C, SPI, UART, more... serial bus timing encode.
- Convenient Timing state display for logic debug.

Guide to Operations

When making measurements with the Digital Storage Oscilloscope / Logic Analyzer Cards, meaningful data can only be captured with some prior knowledge of the characteristics of the circuit under test.
Before initiating any capture cycles, the DSO must be configured using the control program. See the software section later in the manual for instructions on these procedures.
To connect the DSO to the test circuit, there are two standard BNC probes, one for each Analog input channel, and a series of mini-clips on the Logic Analyzer Pod for the Logic Input channels. The scope probes have removable hook clips on their ends and an attached alligator clip for the signal ground connection. The Logic Analyzer Pod has inputs for 12 channels, D0 channel is the external clock input, and 8 ground points.
For synchronous data captures, external clock sources can be connected to the D0 channel.
At times, it may also be necessary to connect the test circuit to the computer system itself. This will eliminate more noise in the test application due to ground level differentials. This is especially true when dealing with high speed timing analysis. Use a heavy gauge wire to make a connection between the test circuit ground and the case of the computer.
Each Analog channel probe has a calibration adjustment. It is important that this calibration be made at least twice a year. See Calibration for more information.

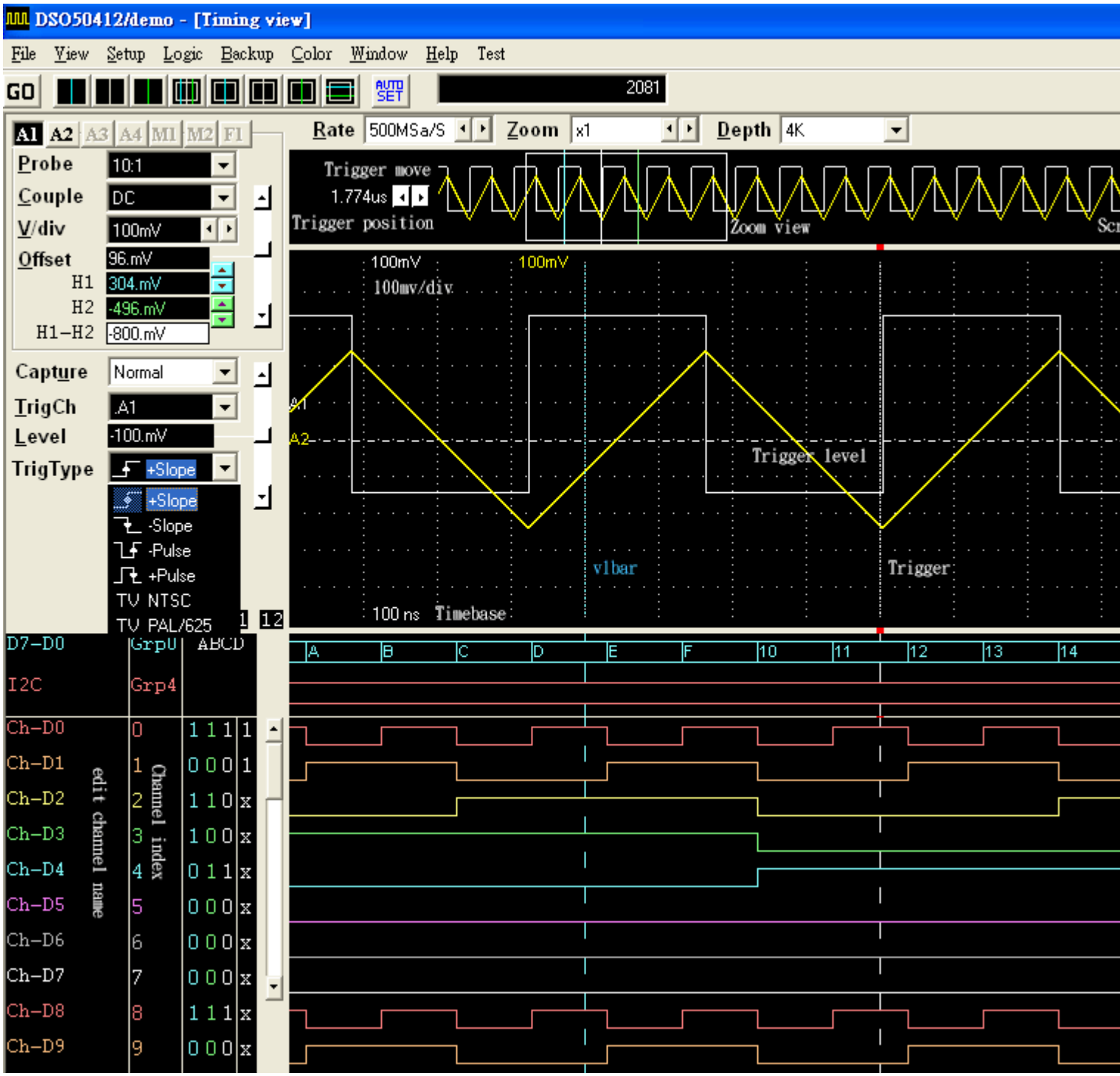
When connecting the probes to any signal, make sure that the signal voltage is Within the limits of the DSO. check the technical information section for absolute maximum and recommended maximum input voltages for the probes.

Logic Analyzer Pod Markings:

D0 ~ D11 Channel data inputs.

GND Signal ground connection.

Main Screen



Horizontal Scroll Bar

This scroll bar is used in conjunction with a selected waveform or cursor. The Horizontal Scroll Bar will move a selected waveform or cursor left or right in the display area.

The Horizontal Scroll Bar works with Display, Analog input channels, Memory, Logic Analyzer channels, V1Bar, V2Bar, and Trigger Bar.

Vertical Scroll Bar

This scroll bar is used in conjunction with a selected waveform or cursor.

The Vertical Scroll Bar will move a selected waveform or cursor up or down in the display area.

The Vertical Scroll Bar works with Display, Analog input channels, Memory, H1Bar, and H2Bar.

Hardware Specifications

DSO-50212M Series Hardware Specifications

Model	DSO-50212M	Remark
Record Length	2MB / Ch	Points
Sampling Rate	Ch.A1: 1Sa/s to 1Gsa/s Ch.A2: 1Sa/s to 500MSa/s D0 ~ D11:1Sa/s to 500MSa/s	With a 1, 2, 5, sequence. Internal clock
External clock	1KHz to 50MHz (max.)	From Logic Channel D0
Analog Channel	Ch.A1, Ch.A2	8bit resolution
Input Bandwidth	ChA1: 200MHz (-3db) Ch.A2:100MHz (+/-0.5db), 125MHz (-1db)	@BNC connect (Probe 10:1)
Input Impedance	1Mohm // 15pF	@BNC connect (Probe 1:1)
Max. input voltage	50v (100v Transient)	
Input Sensitivity	5mv/div to 2v/div	
Trigger Sensitivity	0.5 div (250MHz)	
Trigger Level	Adjustable 250 level	10 Vertical Divisions
Trigger Type	Slope +/-, Pulse width +/-, TV (NTSC / PAL), Horizontal Synchronous Count Trigger.	Pulse detect < 16ns(min.)
Digital Channel	D0 ~ D11 (12ch)	Logic Pod
Input Bandwidth	150MHz (max.)	
Input Impedance	100K ohm || 2pF	
Input Sensitivity	< 500mv	
Channel skew	< 2ns	
Max. Input Voltage	+/- 50v (100v Transient)	
Threshold Voltage	-2v to +6v	by 32mv step
Trigger Qualify	Parallel: 0, 1, X (don't care) settings for al Digital channels I²C: 0, 1, X (don't care) settings for 4 (bytes+ Ack) long SPI: 0, 1, X (don't care) settings for 36bit long	
Operate	Mouse	
Power Supply	DC Adapter 12V/1A	
PC Interface	USB (Version 1.1/2.0)	
Net Weight	1.2 KGS	
Size (Dimension)	230mm x142mm x 40mm	Aluminum Case
Accessories	Logic Analyzer pod, USB 2.0 cable. Calibrated Probe (1:1, 10:1) x 2 pcs. User's Manual, Software CD. Housing with Color wires & clips x 16 pcs. DC Adapter 12V/1.0A.	

DSO-50412M Hardware Specifications

Model	DSO-50412M	Remark
Record Length	2MB / Ch	Points
Sampling Rate	Ch.A1, Ch.A3: 1Sa/s to 1Gsa/s Ch.A2, Ch.A4: 1Sa/s to 500MSa/s D0 ~ D11:1Sa/s to 500MSa/s	With a 1, 2, 5, sequence. Internal clock
External clock	1 KHz to 50MHz (max.)	From Logic Channel D0
Analog Channel	Ch.A1, Ch.A2, Ch.A3, Ch.A4	8bit resolution
Input Bandwidth	Ch.A1, Ch.A3: 200MHz (-3db) Ch.A2, Ch.A4:100MHz (+/-0.5db),125MHz (-1db)	@BNC connect (Probe 10:1)
Input Impedance	1Mohm // 15pF	@BNC connect (Probe 1:1)
Max. input voltage	50v (100v Transient)	
Input Sensitivity	5mv/div to 2v/div	
Max. input voltage	50v (100v Transient)	
Trigger Level	Adjustable 250 level	10 Vertical Divisions
Trigger Type	Slope +/-, Pulse width +/-, TV (NTSC / PAL), Horizontal Synchronous Count Trigger.	Pulse detect < 16ns(min.)
Digital Channel	D0 ~ D11 (12ch)	Logic Pod
Input Bandwidth	150MHz (max.)	
Input Impedance	100K ohm || 2pF	
Input Sensitivity	< 500mv	
Channel skew	< 2ns	
Max. Input Voltage	+/- 50v (100v Transient)	
Threshold Voltage	-2v to +6v	by 32mv step
Trigger Qualify	Parallel: 0, 1, X (don't care) settings for all Digital channels. I²C: 0, 1, X (don't care) settings for 4 (bytes+ Ack) long. SPI: 0, 1, X (don't care) settings for 36bit long.	
Operate	Mouse	
Power Supply	DC Adapter 12V/1A	
PC Interface	USB (Version 1.1/2.0)	
Net Weight	1.8KGS	
Size (Dimension)	230mm x 135mm x 60mm	Aluminum Case
Accessories	Logic Analyzer pod, USB 2.0 cable. Calibrated Probe (1:1, 10:1) x 4 pcs. User's Manual, Software CD. Housing with Color wires & clips x 16 pcs. DC Adapter 12V/2.0A.	

Hot Key Function

"G"/"g"	GO/Stop
"P"/"p"	Probe
"C"/"c"	Couple
"V"/"v"	V/div
"O"/"o"	Offset
"U"/"u"	Capture
"T"/"t"	TrigCh (Trigger Channel)
"R"/"r"	Rate
"Z"/"z"	Zoom
"D"/"d"	Depth
"Space"	to switch A1,A2,A3,A4,F1 Channel
"Print screen"	Copy screen image to clip board.
Control key	
Ctrl +"G"	Turn On/Off Grid display.
Ctrl +"H"	Turn On/Off H bar display.
Ctrl +"D"	Turn On/Off Dots connect.
Ctrl +"Z"	Turn On/Off Zoom view.
Ctrl +"P"	Perform persist.
Ctrl +"R"	Refresh screen.

Tool Bar

GO The Go command tells the DSO to start acquiring data when the trigger conditions are satisfied.
Pressed means Start capture, un-pressed means stop capture.

Moves one or more cursors to the display area. These commands are also available by clicking on the toolbar.

Centers waveform display area around V1Bar.

Centers waveform display area around V2Bar.

Centers waveform display area around the Trigger Bar.

Moves Trigger Bar, V1Bar and V2Bar onto the waveform display area.

Moves V1Bar onto the waveform display area.

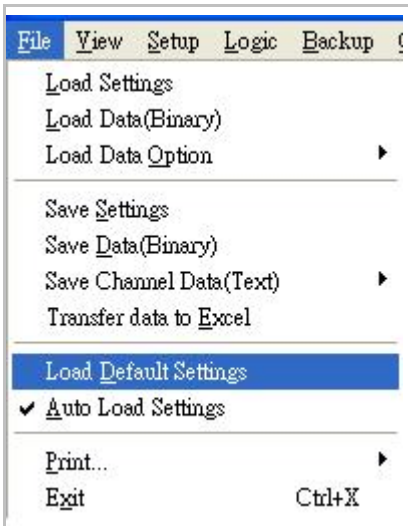
Moves Trigger Bar onto the waveform display area.

Moves V2Bar onto the waveform display area.

Moves H1Bar and H2Bar onto the waveform display area.

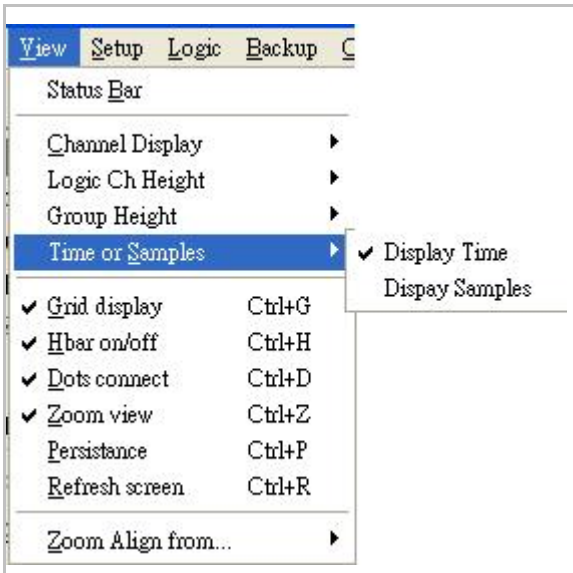
Automatic setup parameters for Trigger Channel.

File Menu



Load data	This option loads a data file (.dso), with a setting file (.ini) together.
Load data option	This option select of A1, A2, A3, A4 or D0 ~ D11 channel to be load.
Save setting	This option saves the current settings to a setting file (.ini).
Save data	This option saves a data file (.dso), every time saves all (A1, A2, A3, A4, D0-D11) data depend on Depth setting.
Transfer data to Excel	This option will convert data to Microsoft Excel by Decimal, Hexdecimal, Ascii or unit(v).
Load setting	This option loads a previously Setting file (.ini).
Load Default Setting	Reset all parameters to factory defaults.
Auto. Load Setting	Turns on or turns off the Autoload option. When this option is on, all settings will be loaded when start the program.
Print Screen	This option allows you to print Screen (Hard copy).
Print FFT	This option allows you to print FFT form.
Print Timing View	This option allows you to print Main Screen Form.
Exit	Use this command to end your session. You can also use the Close command on the application Control menu.

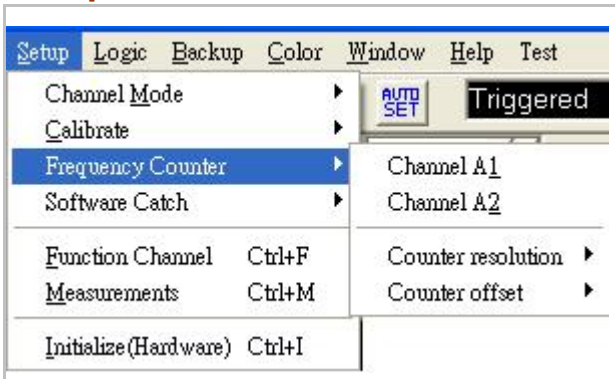
View Menu



Status Bar	Show or hide Status Bar.
Channel display	When display is checked, the channel will be displayed on the screen. When display is not checked, the channel will not be displayed on the screen. Turning Display off for a channel will speed up the display. However the data is still acquired from that channel unless transfer is turned off. A channel's display can also be set with the buttons on the left edge of the screen. If the channel is on the button will be highlighted. You can also turn on/off transfer of the data for a channel. Note: This command applies to both analog and digital channels.
Channel Height	Adjust height of logic channel (D0 ~ D11).
Time and Samples	For Timing display, display Time like as 123.456ms, or display how many samples.
Grid	Show or hide grid on analog display.
Dots connect	**Dots connect off** None checking this option will display only the data points of the analog waveform. Logic data is unaffected by this option. This is the second fastest display option. Note that Lines will always be shown when in Sin (X) / X or Filter Interpolation modes. **Dots connect on** Checking this option will display the lines connecting the data points and the data points of the analog waveform. Logic data is unaffected by this option. This is the slowest display option. Note: The lines and dots can be set to different colors.
Zoom view	Compress and display the entire memory on the up screen.
Persistence	Turns on or turns off Persistence Mode. In this mode, with each acquisition of data, all previous waveform data remains on the display area. This mode is useful for finding waveform anomalies that occur infrequently. Persistence Mode is also useful for evaluating signal

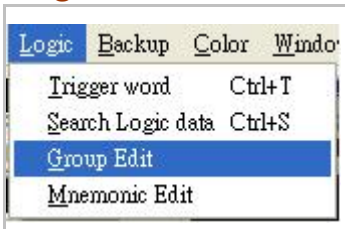
	jitter. Scroll, zoom, change display width, or any update of the screen will erase all of the old data and will initiate a new Persistence Mode capture. To turn Persistence On, select Persistence from the View Menu. To turn Persistence Off, select Persistence again from the View Menu. **Note:** scroll, zoom, change display width, or any update of the screen will erase all of the old data. See also: View menu, Toolbar, clear button.
Zoom align from	Set cursor Bar (V1, V2, Trigger, Screen (left or center)) for zoom operate reference.

Setup Menu

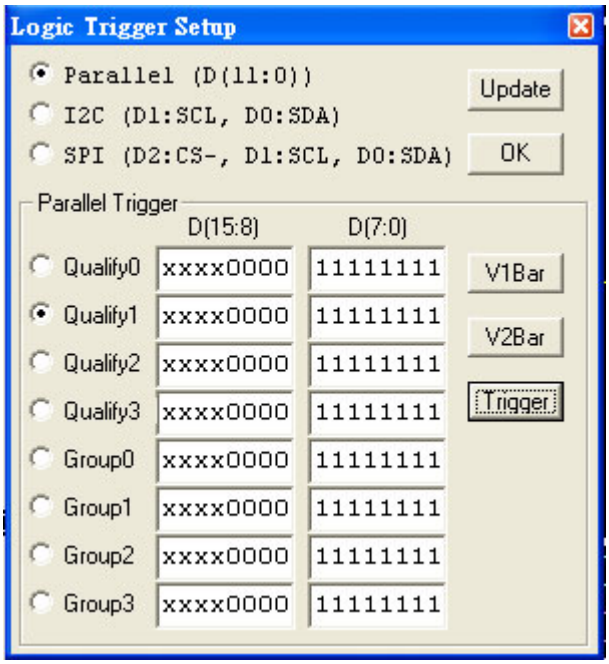


Channel mode	To select 1 Ch (1Gsa/s sampling) or 2 Ch (500Msa/s) mode in DSO-50212. To select 2 Ch (1Gsa/s sampling) or 4 Ch (500Msa/s) mode in DSO-50412.
Calibration	1. Connect the scope probe Ground Connection to the BNC GND. 2. Hold the probe's tip against the calibration point on the BNC center Hole. 3. A Square wave signal should appear on the screen. 4. Adjust the probe calibration until a true square wave is shown on the screen, noting the corners of the waveform which should be sharp and square, not rounded over or peaky.
Frequency counter	Precision 7 digital resolution frequency counter for A1, A2, A3, A4 channel.
Software catch	To capture data rate lower 500Sa/s be used, no Triggering.
Function Channel	To perform Channel +, -, *, /.
Measurements	Setup Measure Item.
Initialize (Hardware)	This function allows you to restart DSO.

Logic Menu



Trigger word

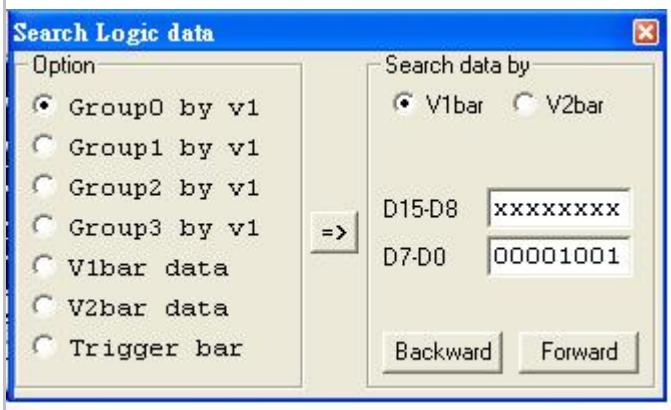


Set Trigger word for digital channel 11 ~ 0 or Group 0 ~ 3.

The Trigger word backup four Qualify data and four Group data for quickly set digital trigger.

conveniently setup from V bars.

Search data

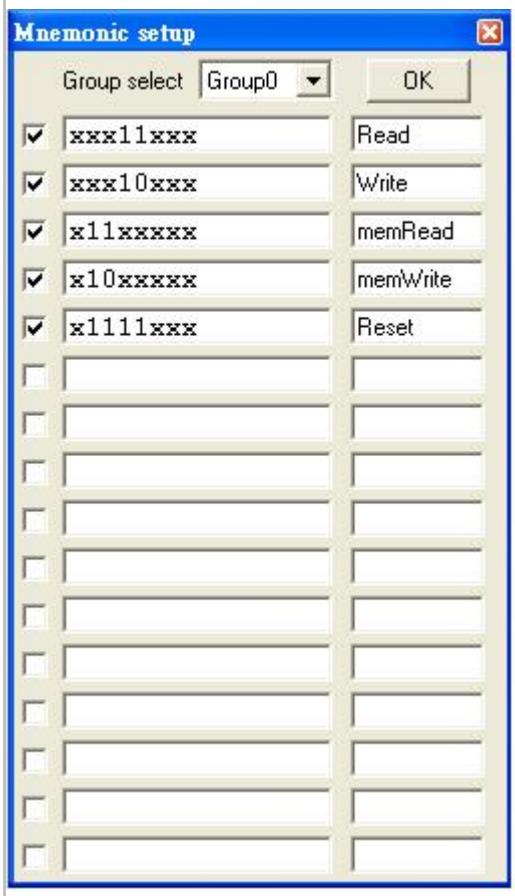


Sorting through all your data is easier with our search feature ! You can specify a search pattern, including Don't Care bits, in any shown numeric bases. Then just click on the forward or backwards search to find what you are looking for !

Group edit

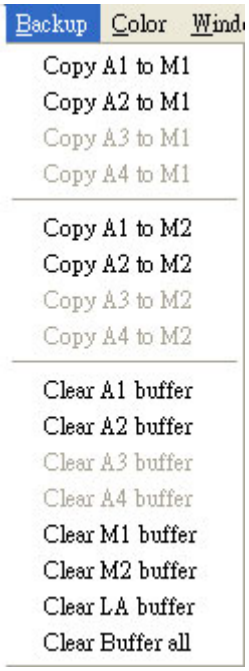
Edit channel 11 ~ 0 for Group Channel, every Group Channel supports 16 Ch Max. Could be display in Hex, decimal, binary, Oct, or Ascii code.

Mnemonic edit



As figure Edit Mnemonic code for Groups.

Backup



Backup Analog Channel to M1, M2 channel:

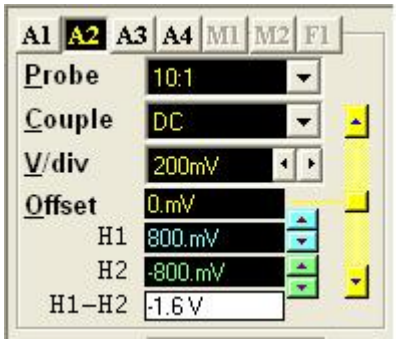
Copy A1 to M1 Store channel A1 to M1(memory 1)

Copy A1 to M2 Store channel A1 to M2(memory 2)

Copy A2 to M1 Store channel A1 to M1(memory 1)

Copy A2 to M2 Store channel A1 to M2(memory 2)

Channel Box



A different channel can be selected by hitting the "A1, A2, A3, A4, M1, M2, F1" Channel select button.

Probe

This controls the attenuation level for the probe inputs. This should be set to match the probe itself, either 1x, 10x, 100x or 1000x. When working with signal amplitudes within 200V, either the 1X or the 10X setting can be used. However, if the signal amplitude is outside of 200V, use the 100X setting. Note that using the 10X setting with both the probe and the scope even for signals within 200V will provide better frequency response through the system due to smaller voltage swings through to the digitizer..

Voltage range Probe and probe settings:

5mv/div to 2v/div @probe 1:1

50mv/div to 20v/div @probe 10:1

500mv/div to 200v/div @probe 100:1

5v/div to 2000v/div @probe 1000:1

Coupling

The three selections available are AC, DC, and GND couple. In the AC setting, the signal for The selected channel is coupled capacitivity, effectively blocking the DC components of the input signal and filtering out frequencies below 10 Hz. The input impedance is 1MW || 5pF.

In the DC setting, all signal frequency components of the signal for the selected channel, are allowed to pass through. The input impedance is 1 MW || 5pF.

In the GND setting, both the input and the A/D converter are connected to ground. Again, the input impedance is 1 MW || 5pF. Use for setting the Ground reference point on the display or if calibrating the DSO board.

Volts/Division

V/div controls the vertical sensitivity factor in Volts/division for the selected analog channel.

Each V/div step follows in a 1-2-5 sequence.

To get the best representation of the input signal, set V/div such that the maximum amplitude swing is displayed on the screen.

This will match the signal amplitude to use most of the digitizer's range, allowing the most bits to be used.

Volts/division can be set via the V/div Combo to Settings.

Volts/division Probe can be set to

5mV, 10mV, 20mV, 50mV, 100mV, 200mV, 500mV, 1V, 2V (1:1)

50mV, 100mV, 200mV, 500mV, 1V, 2V, 5V, 10V, 20V (10:1)

500mV, 1V, 2V, 5V, 10V, 20V, 50V, 100V, 200V (100:1)

5V, 10V, 20V, 50V, 100V, 200V, 500V, 1000V, 2000V (1000:1)

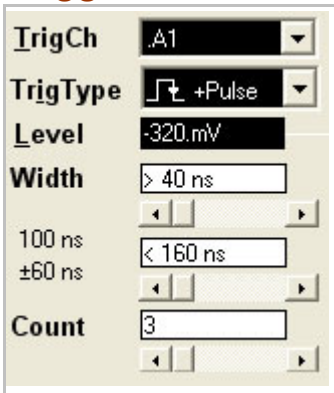
Offset

This parameter offsets the input signal in relation to the digitizer. This changes the usable input voltage range. The input voltage range is the offset +/- 5 divisions.

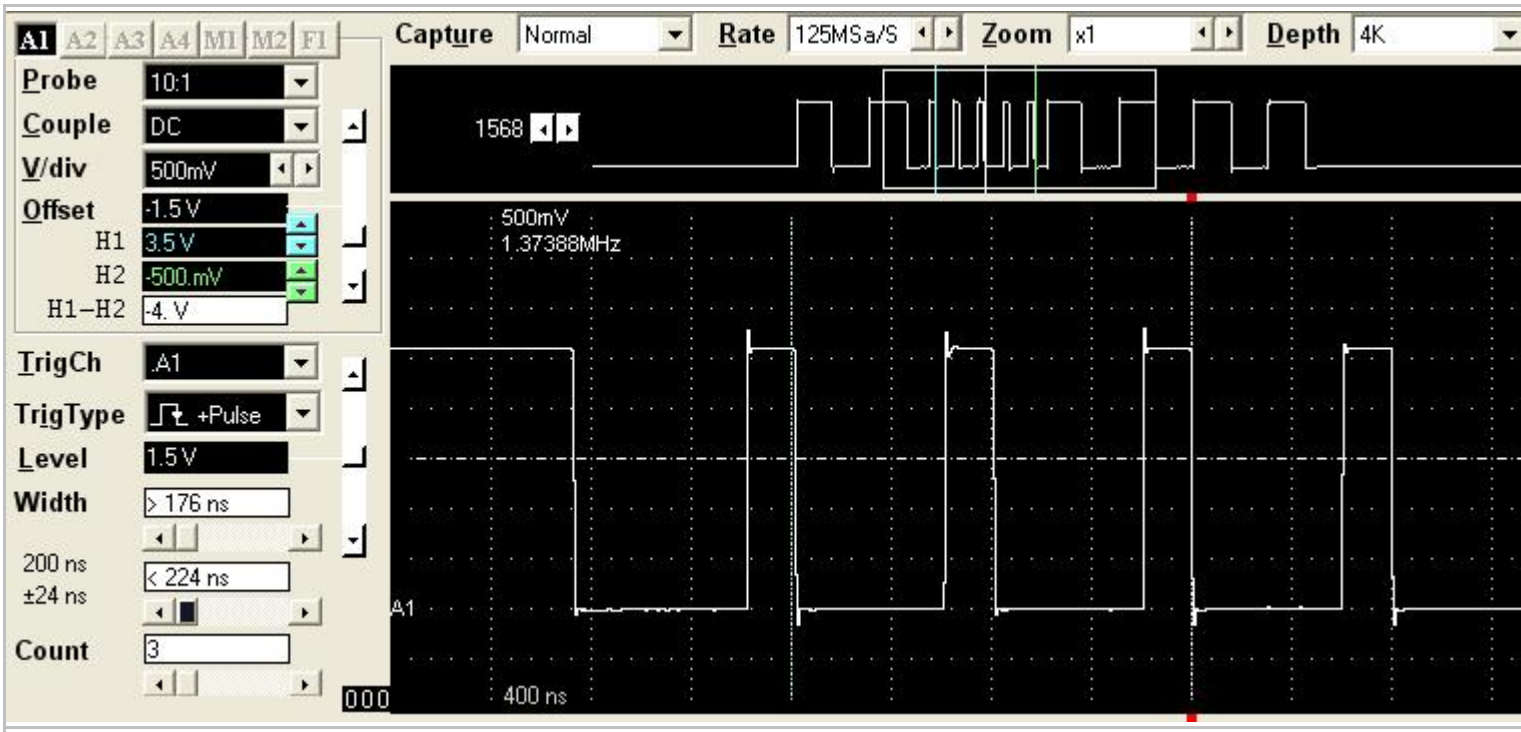
Thus if you moved the offset to 1.00V with 1V /division the usable range would be 6.00V to -4.00V. Data outside the input range is clipped and stored as either the max or min input value. The offset references the 0.00V point (GND) for the input channel.

The ground point is marked on the screen by the Ground Point Tick Marks to the right of the Analog Display. To change the offset in this dialog box, move the elevator button in the scroll bar. The offset can also be changed by grabbing and moving the appropriate Ground Point Tick Mark in the analog display area.

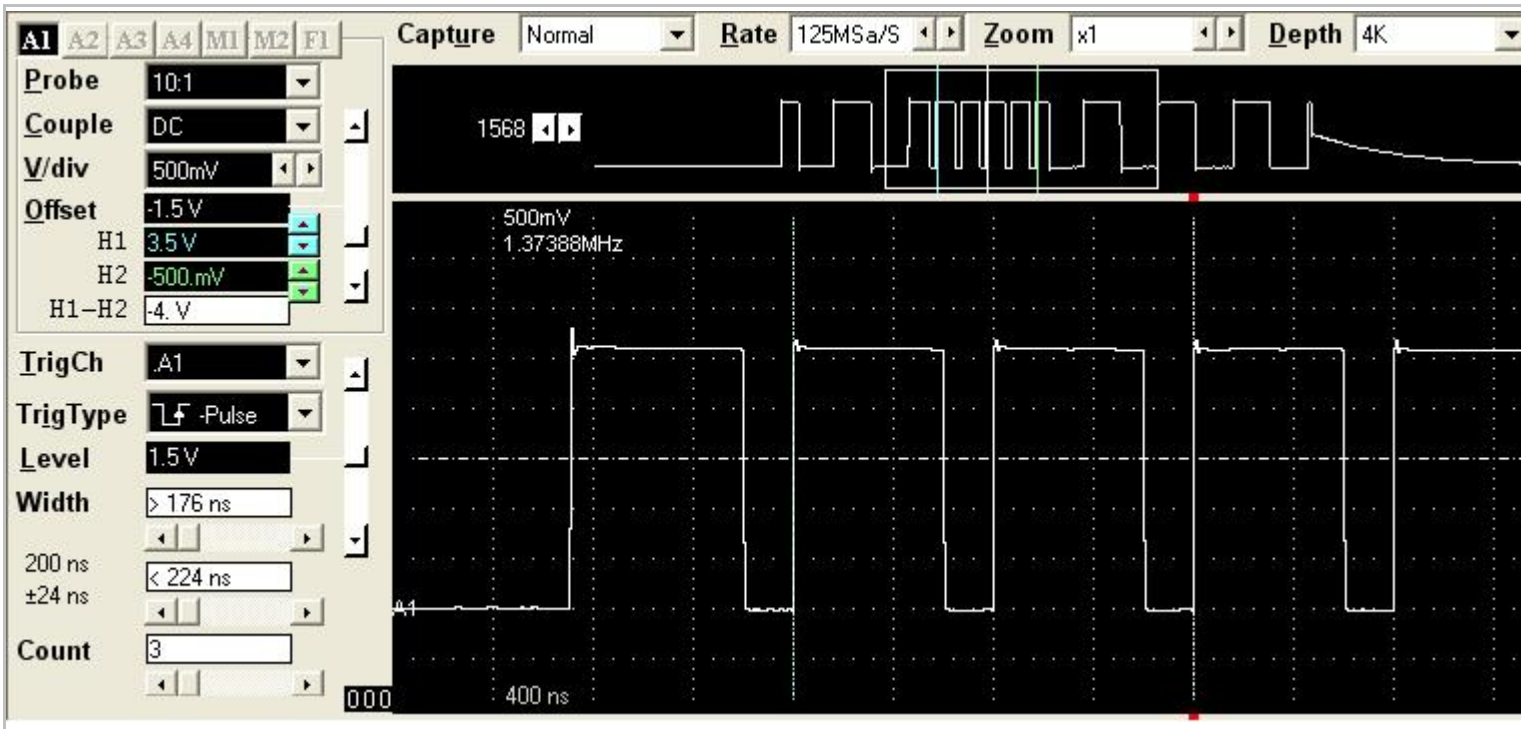
Trigger Box



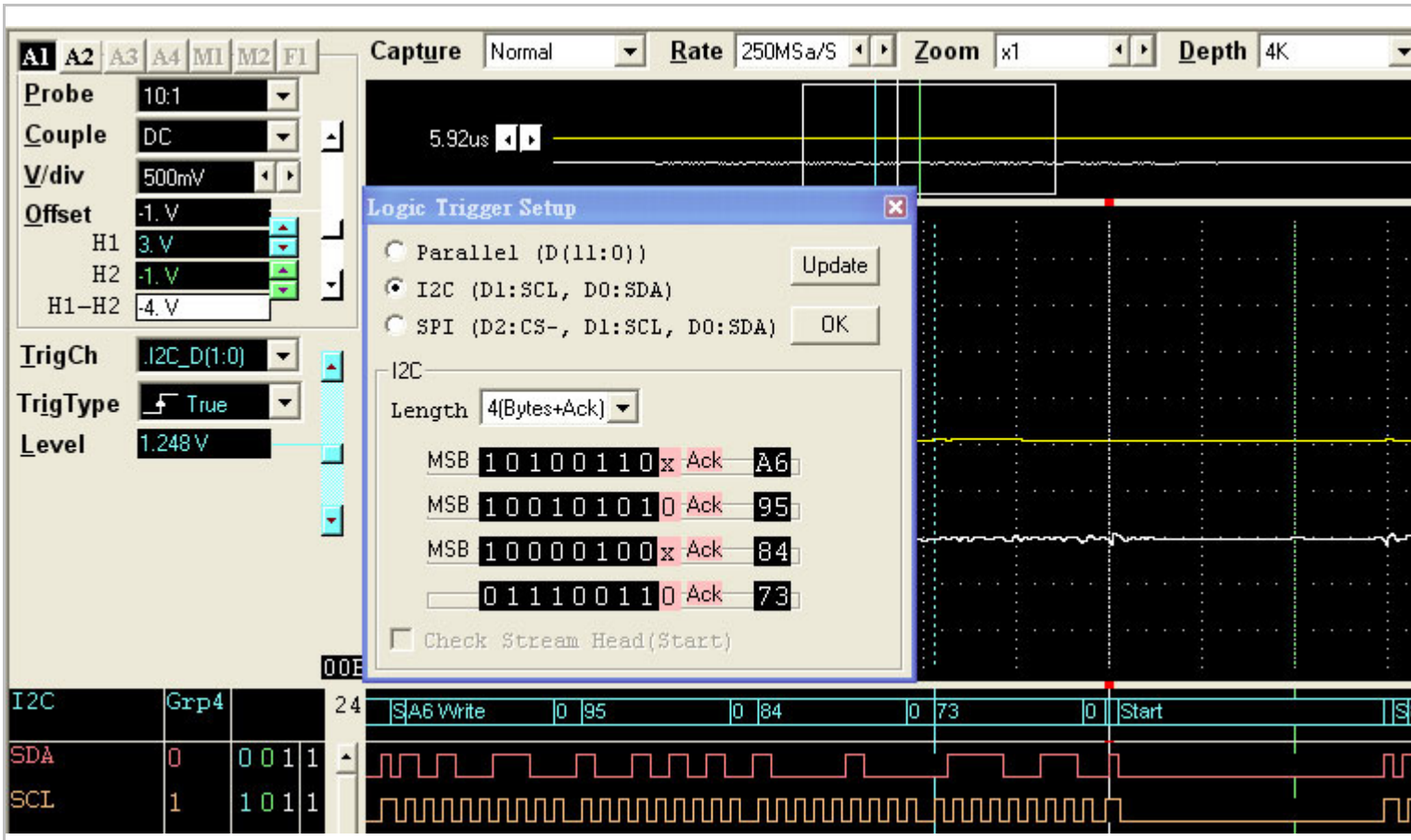
TrigCh	To select A1, A2, A3, A4 or Logic pod for Trigger source.
TrigType	To select +Slope, -Slope, +Pulse width, -Pulse width, NTSC/525 or PAL/625 for Analog channel.
Level	To adjust Trigger Level for A1, A2, A3, A4 or Threshold for Logic Channel.
Width (Pulse width)	To adjust pulse width for A1, A2, A3, A4 Analog Channel trigger.
Count	To adjust pulse count for A1, A2, A3, A4 Analog Channel trigger.



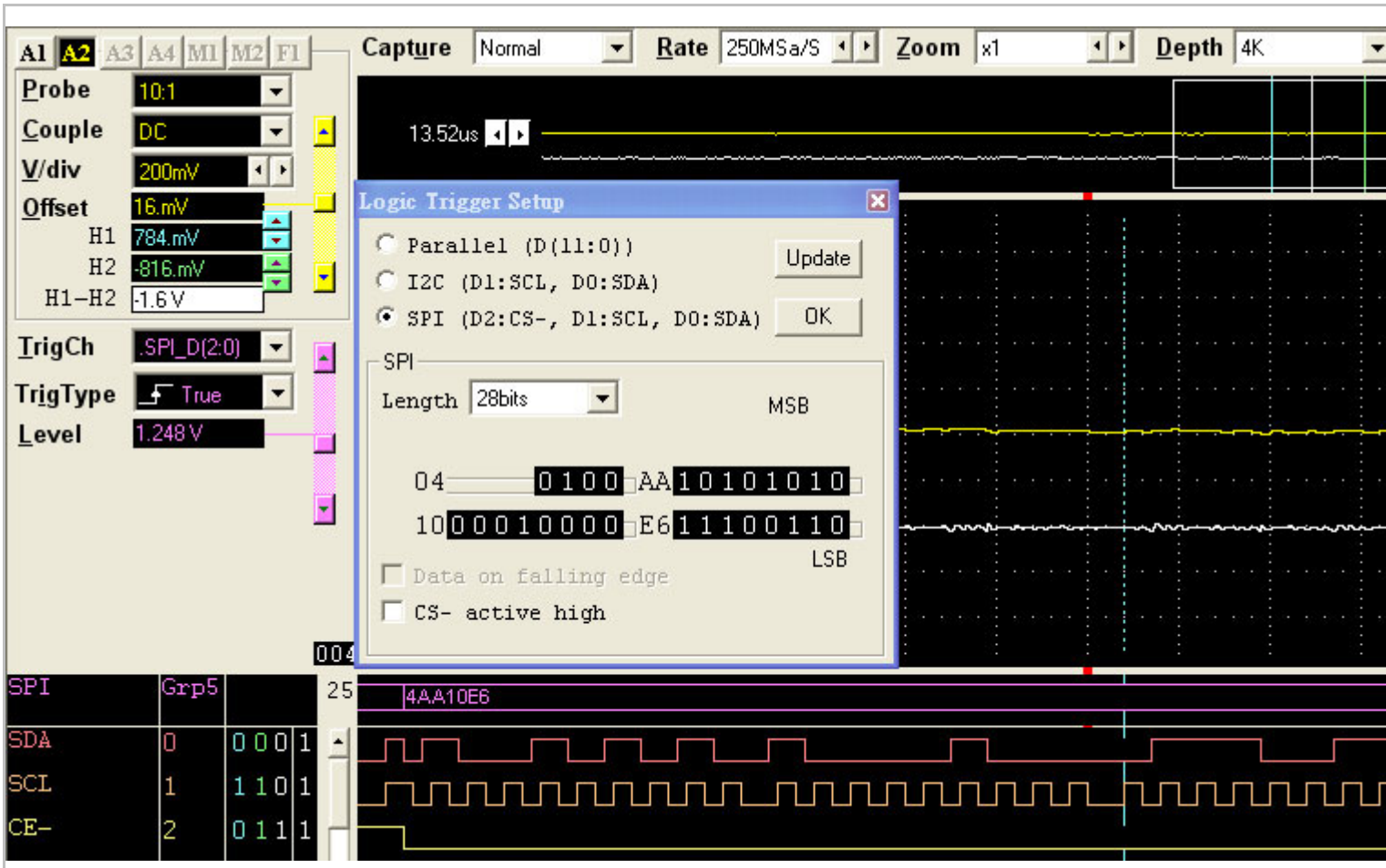
This figure shows 200ns +Pulse width Trigger at third count.



This figure shows 200ns -Pulse width Trigger at third count.

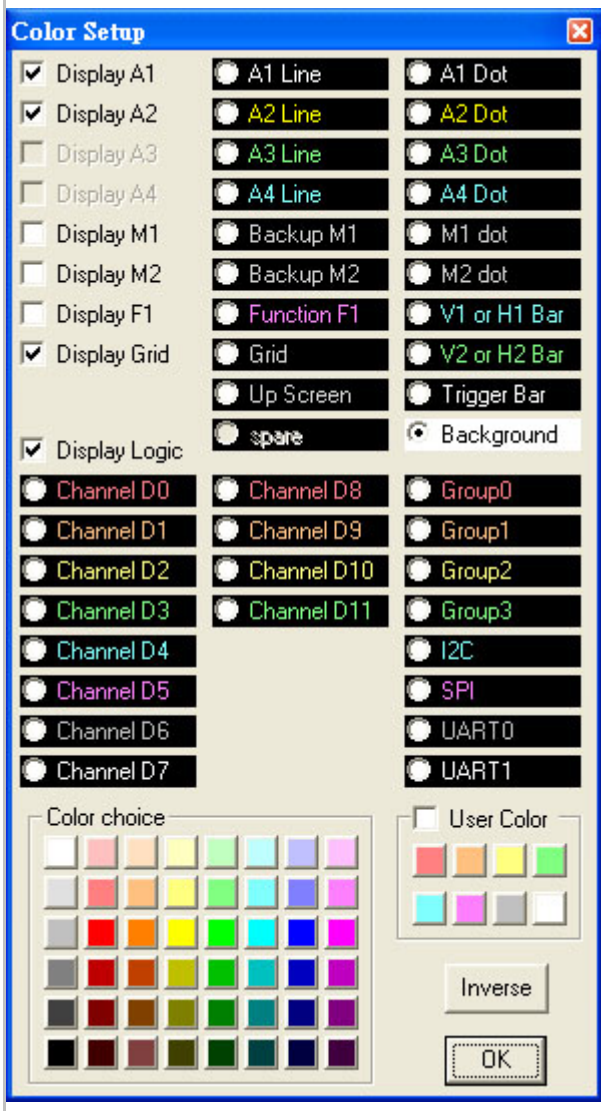


This figure shows 4 (bytes + Ack) **I2C** Trigger.



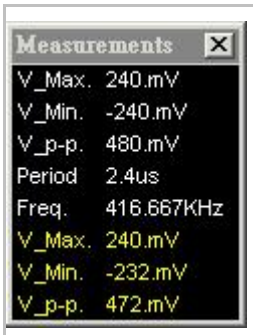
This figure shows 28 bits **SPI** Trigger.

Color Setup



The color of each channel, Group, cursor line(V1, V2, Trigger bar, Screen, H1,H2)... can be set independently.

Measurements

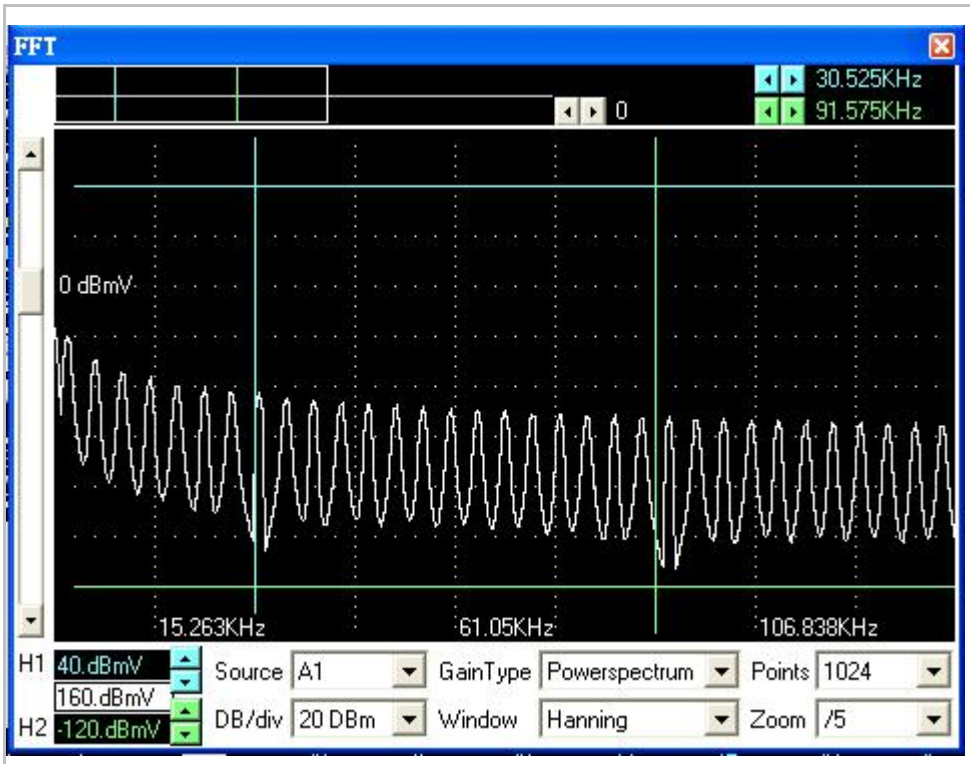


Automatic measurements on input waveforms can be performed. These include frequency, period, rise time, fall time, min, max, area, ...
Pulse parameter measurements are performed as specified by ANSI/IEEE std 181-1977 IEEE Standard on Pulse Measurement and Analysis by Objective Techniques.
Up to 10 signal parameters can be measured, tested, and displayed simultaneously. To setup A measurement, select the Measurements (Setup menu) and choose one of the tests to setup (1 to 11).

Parameter Measurements

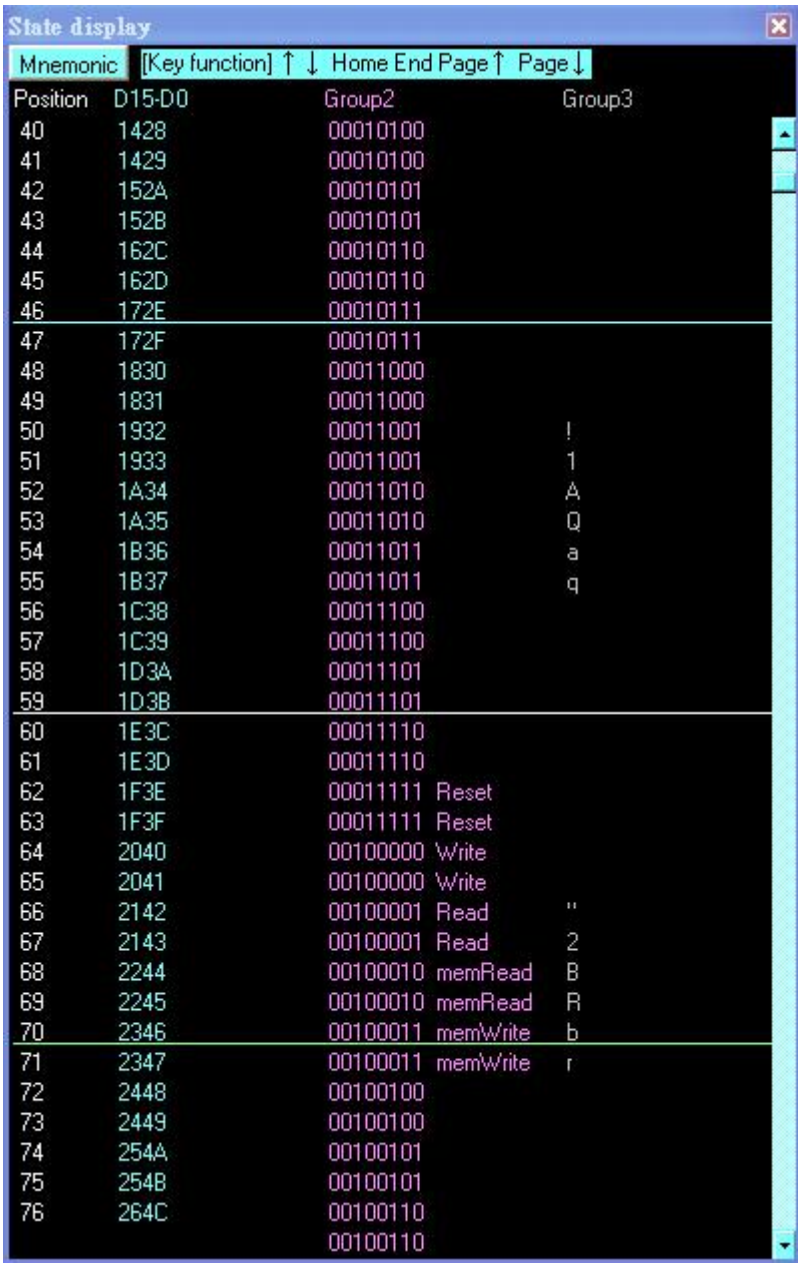
Area	Sum of all voltages * sample time.
V1Bar (time)	V1Bar (time) position of V1Bar in time.
V2Bar (time)	V2Bar (time) position of V2Bar in time.
Trigger (time)	Trigger position of trigger Bar in time.
V1-V2 (time)	Time difference between V1Bar and V2Bar.
V1-trigger (time)	Time difference between V1Bar and Trigger.
V2-trigger (time)	Time difference between V2Bar and Trigger.
H1-H2 (voltage)	Voltage difference between H1Bar and H2Bar.
V_max.	Maximum voltage.
V_min.	Minimum voltage.
V_p-p.	The difference between maximum and minimum voltages.
V_avg.	Average of minimum and maximum voltages.
rms SQRT	((1/ # samples) * (sum ((each voltage) * (each voltage))))
rms (AC) SQRT	((1/ # samples) * (sum ((each voltage - mean) * (each voltage - mean))))
Period	Average time for a full cycle for all full cycles in range.
Risetime(10..90)	Average time for a rising transition between the 10% to the 90% points.
Risetime(20..80)	Average time for a rising transition between the 20% to the 80% points.
Falltime(10..90)	Average time for a falling transition between the 10% to the 90% points.
Falltime(20..80)	Average time for a falling transition between the 20% to the 80% points.
Pulse width (positive)	Average width of positive pulses measured at 50% level.
Pulse width (negative)	Average width of negative pulses measured at 50% level.
Frequency	Average frequency of waveform.

FFT



The FFT window allows control and display of FFT's.
The following controls are available:
Window Select the FFT window type: (Triangular, Hanning, Hamming, Blackman-Harris, Rectangular, Wetch and Parzen).
Sample points Select how many points the FFT will sample, points can't exceed memory depth.Horizontal zoom Select horizontal zoom ratio.
The FFT routines will process the selected channel starting at V1Bar and continue until "Sample Points" number of points has been reached. If V1Bar is not within the buffer, start of buffer will be used.
Further information on FFT's can be found in the following sources:
Embedded Systems Programming magazine Volume 3, Number 5, May. 1990
Embedded Systems Programming magazine Volume 7, Number 9, Sept. 1994
Embedded Systems Programming magazine Volume 7, Number 10, Oct. 1994
Embedded Systems Programming magazine Volume 8, Number 1, Jan. 1995
Embedded Systems Programming magazine Volume 8, Number 2, Feb. 1995
Embedded Systems Programming magazine Volume 8, Number 5, May. 1995
Circuit Cellar Ink, The Computer Applications Journal Issue 52 Nov. 1994
Circuit Cellar Ink, The Computer Applications Journal Issue 61 Aug. 1995
Dr. Dobb's Journal Issue 227 Feb. 1995

State List



Channels can be organized into groups and be displayed on screen in ASCII, binary, decimal, hex-decimal, and user defined mnemonics.

Channels can be displayed in any sequence. Time between V1bar, V2bar, and Trigger is displayed.

USB driver install

Windows 2000 USB driver install

When USB2.0 control interface be connected to computer, screen will display as following:

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install a device driver for a hardware device.
To continue, click Next.
< Back
Next >
Cancel

Click Next to continue

Found New Hardware Wizard
Install Hardware Device Drivers
A device driver is a software program that enables a hardware device to work with an operating system.
This wizard will complete the installation for this device:
USB2.0 Device
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.
What do you want the wizard to do?
Search for a suitable driver for my device (recommended)
Display a list of the known drivers for this device so that I can choose a specific driver
< Back
Next >
Cancel

Click Next to continue

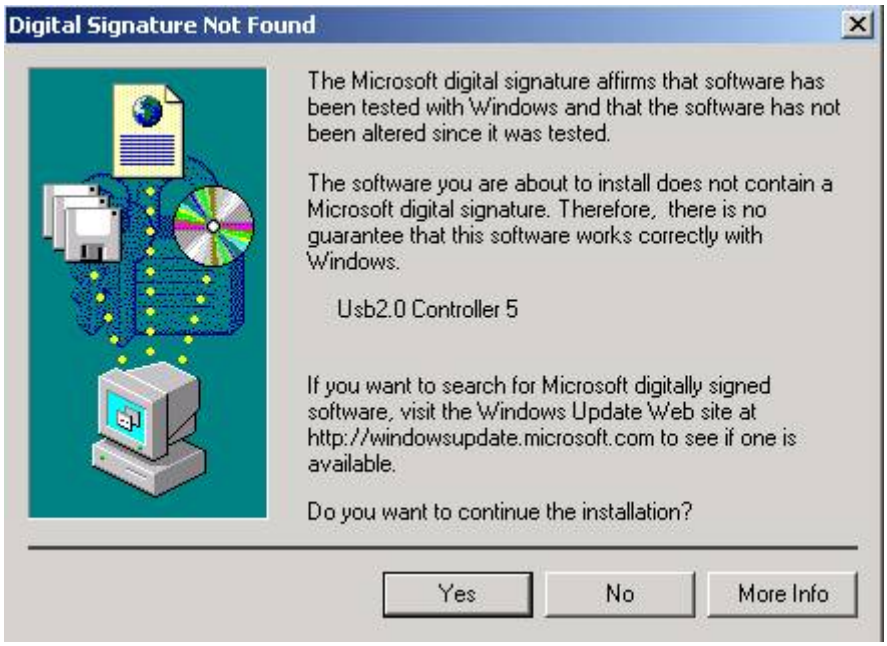
Found New Hardware Wizard
Locate Driver Files
Where do you want Windows to search for driver files?
Search for driver files for the following hardware device:
USB2.0 Device
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify.
To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.
Optional search locations:
Floppy disk drives
CD-ROM drives
Specify a location
Microsoft Windows Update
< Back
Next >
Cancel

Click Next to continue

Edit or browse path to ...\USB20driver\win2000_XP\gene.inf
(here F: is CD location, dso25216 may be dso50x12 or dso29xxA/B or la5000 or pg32x00)
Press OK

Upgrade Device Driver Wizard
Driver Files Search Results
The wizard has finished searching for driver files for your hardware device.
The wizard found a driver for the following device:
USB2.0 Device
Windows found a driver that is a closer match for this device than your current driver.
To install the driver Windows found, click Next.
f:\dso25216\usb20driver\win2000_xp\gene.inf
< Back
Next >
Cancel

Click Next to continue


Digital Signature Not Found
The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested.
The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows.
Usb2.0 Controller 5
If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available.
Do you want to continue the installation?
Yes
No
More Info

Click Yes to continue

Found New Hardware Wizard
Completing the Found New Hardware Wizard
Usb2.0 Controller 5
Windows has finished installing the software for this device.
To close this wizard, click Finish.
< Back
Finish
Cancel

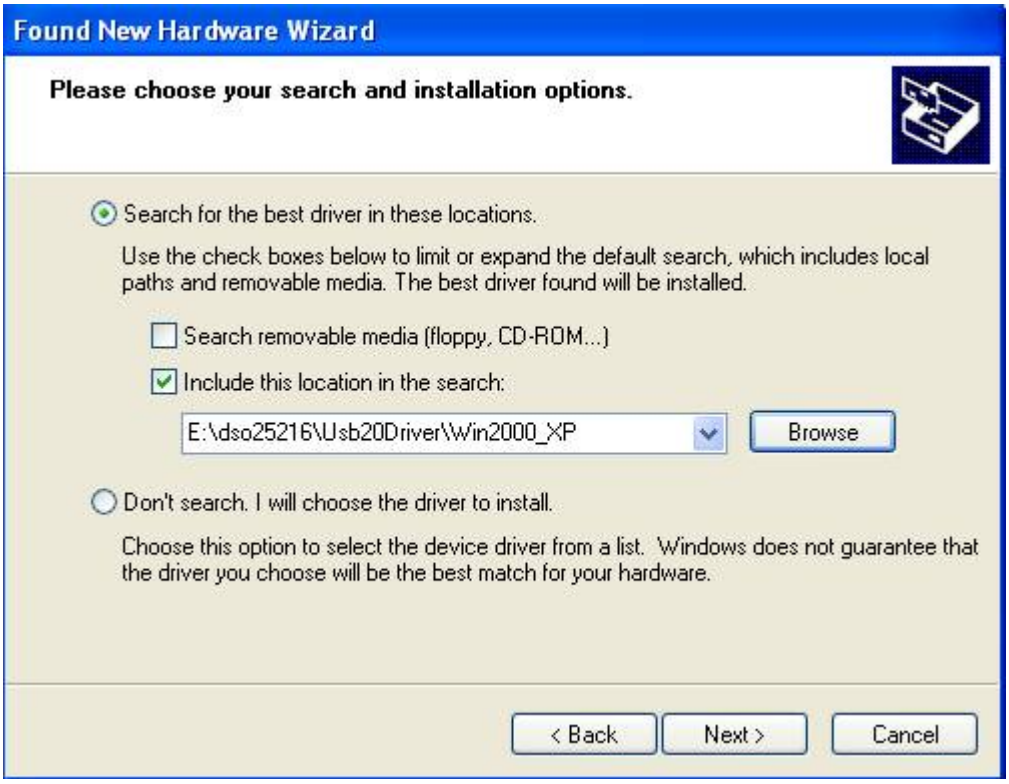
Completing install

Windows XP USB driver install

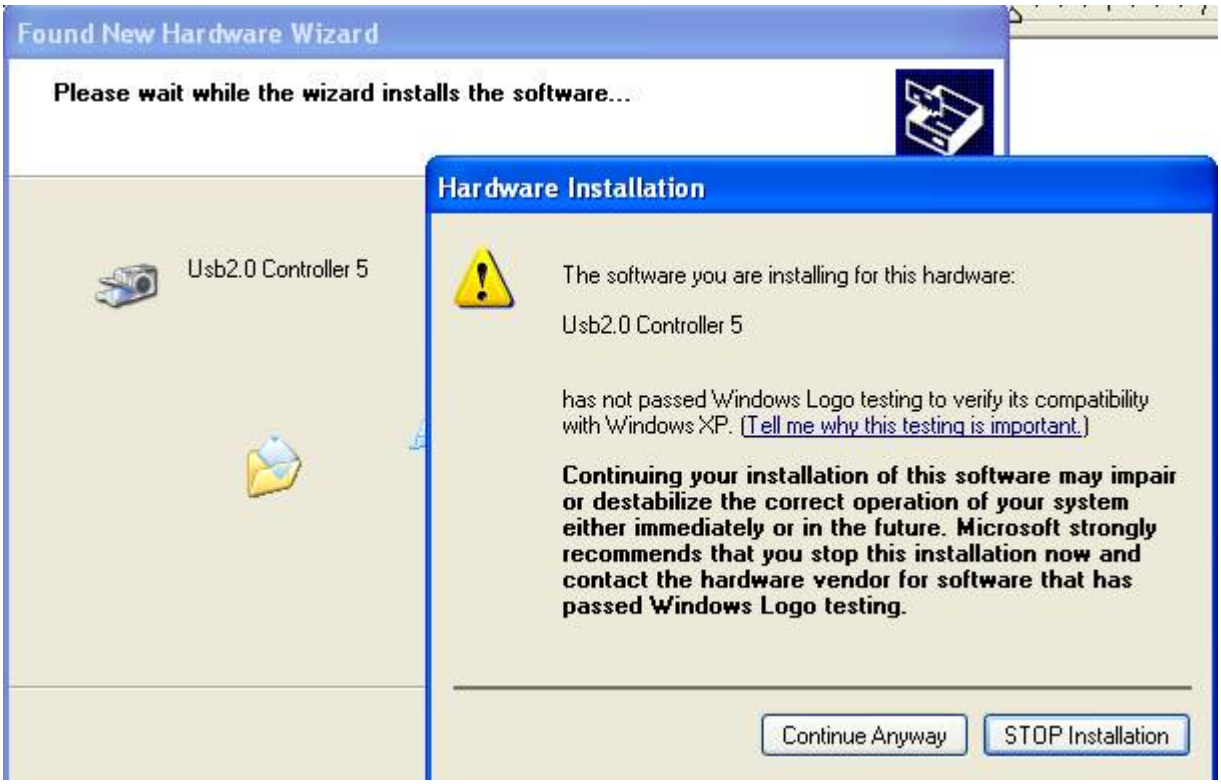
When USB2.0 control interface be connected to computer, screen will display as following:

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
USB2.0 Device
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

Click Next to continue


Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
E:\dso25216\Usb20Driver\Win2000_XP
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

Edit or browse path to ...\USB20driver\win2000_XP\gene.inf
(here E: is CD location, dso25216 may be dso50x12 or dso29xxA/B or la5000 or pg32x00)
Click Next to continue

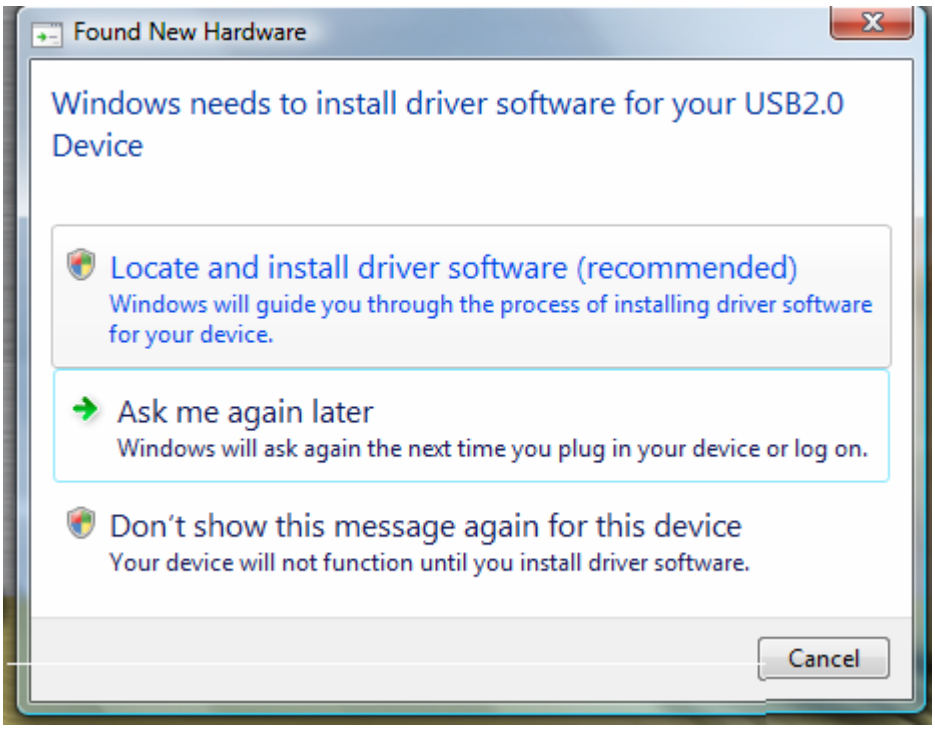

Found New Hardware Wizard
Please wait while the wizard installs the software...
Usb2.0 Controller 5
Hardware Installation
The software you are installing for this hardware:
Usb2.0 Controller 5
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

Press Continue Anyway

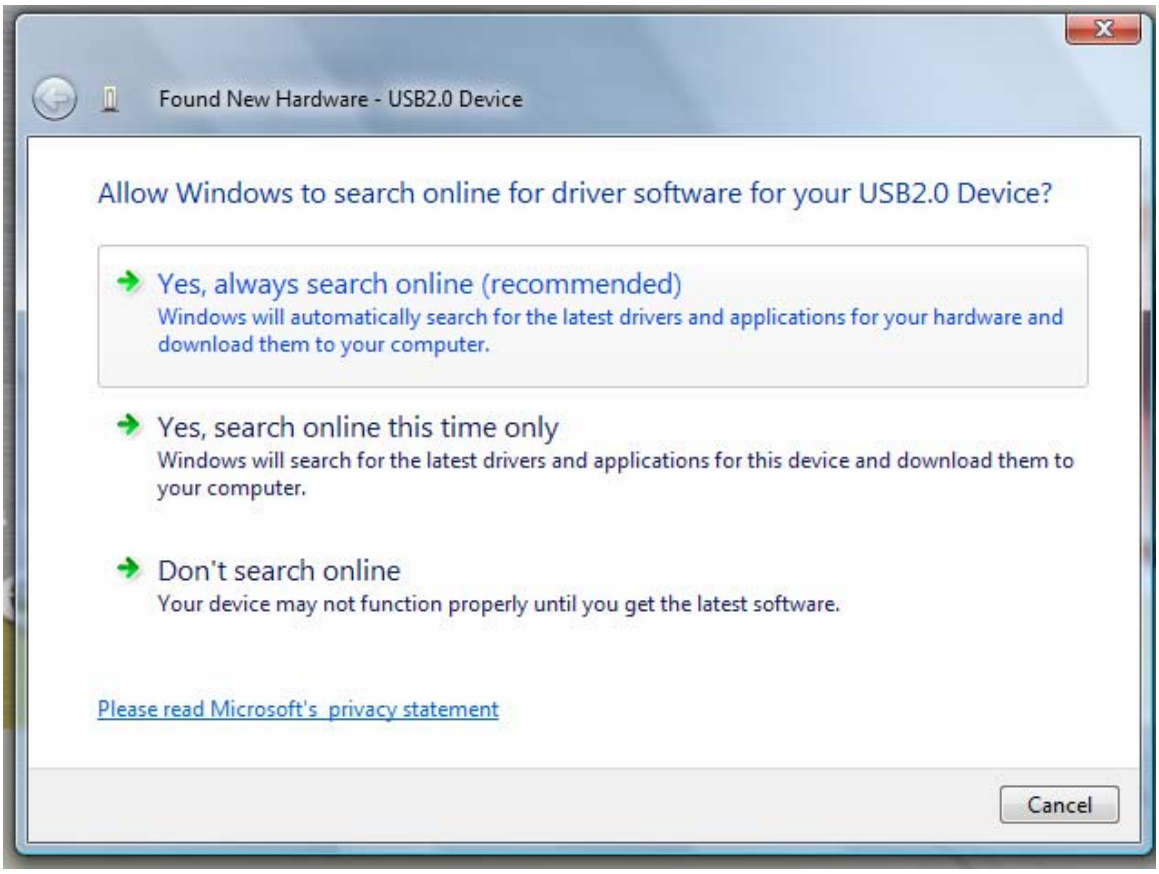
Completing install

Windows Vista USB driver install

When USB2.0 control interface be connected to computer, screen will display as following:


Found New Hardware
Windows needs to install driver software for your USB2.0 Device
Locate and install driver software (recommended)
Windows will guide you through the process of installing driver software for your device.
Ask me again later
Windows will ask again the next time you plug in your device or log on.
Don't show this message again for this device
Your device will not function until you install driver software.
Cancel

Press **Locate and install driver software (recommended)** Continue Anyway

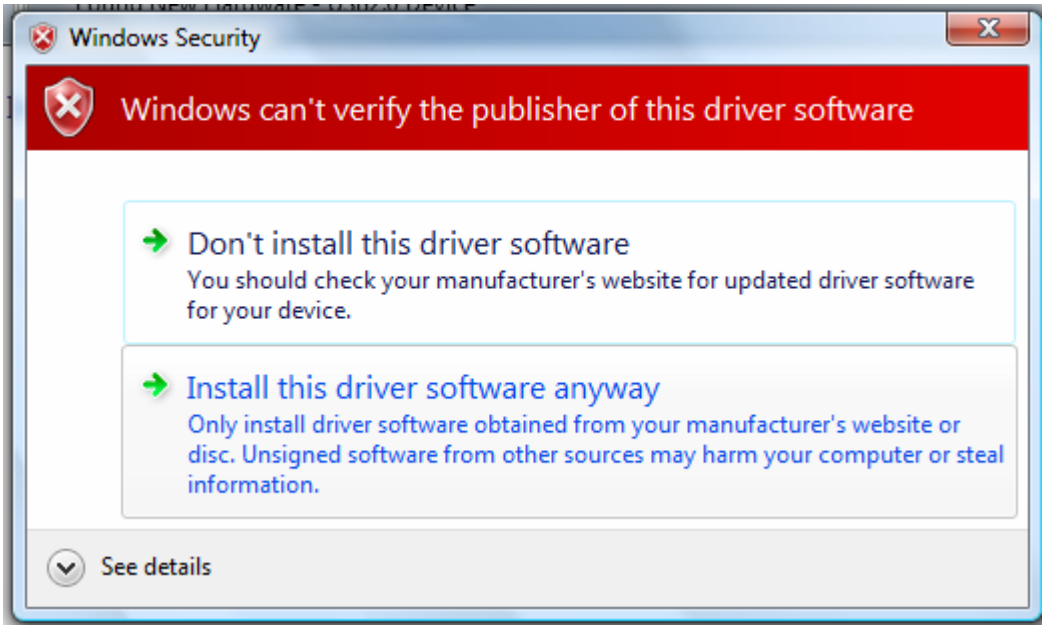

Found New Hardware - USB2.0 Device
Allow Windows to search online for driver software for your USB2.0 Device?
Yes, always search online (recommended)
Windows will automatically search for the latest drivers and applications for your hardware and download them to your computer.
Yes, search online this time only
Windows will search for the latest drivers and applications for this device and download them to your computer.
Don't search online
Your device may not function properly until you get the latest software.
Please read Microsoft's privacy statement
Cancel

Press Continue Anyway

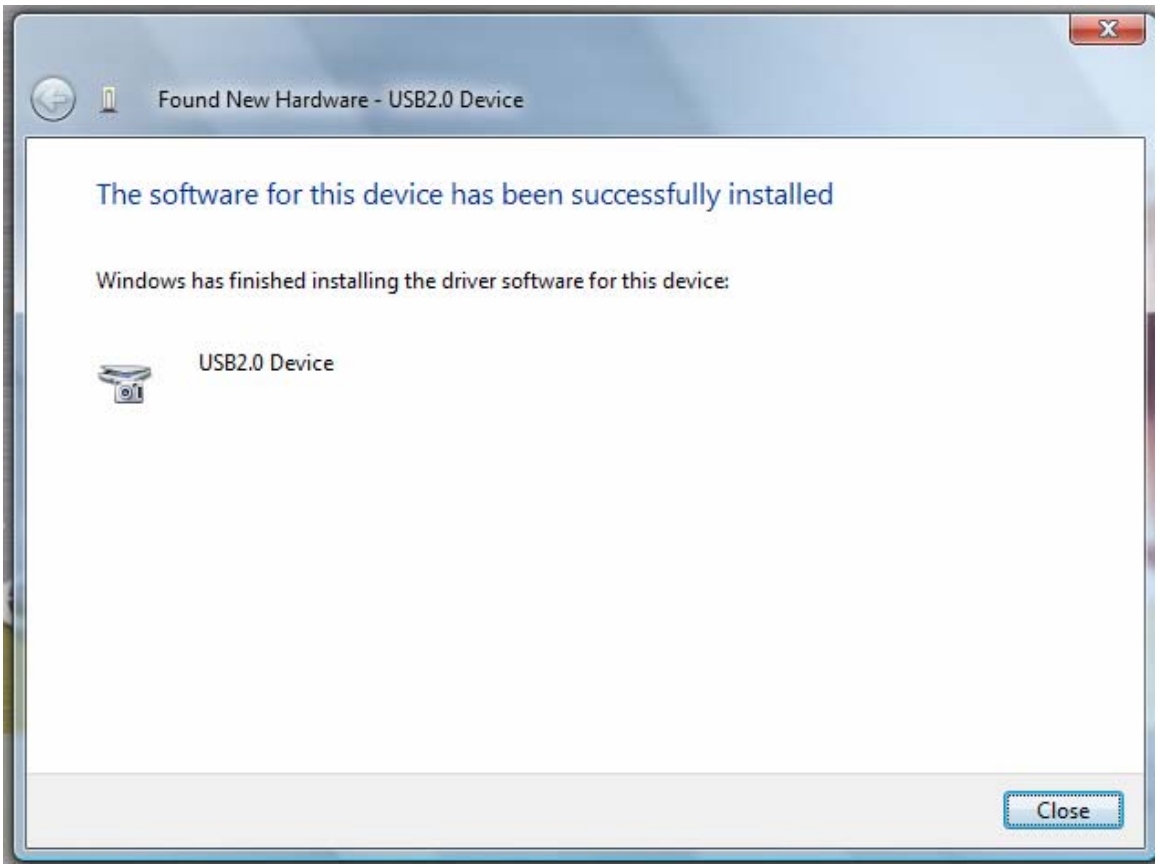
Found New Hardware - USB2.0 Device
Insert the disc that came with your USB2.0 Device
If you have the disc that came with your device, insert it now. Windows will automatically search the disc for driver software.
I don't have the disc. Show me other options.
Next
Cancel

Press **Insert the disc that came with your USB2.0 Device**

Click Next to continue


Windows Security
Windows can't verify the publisher of this driver software
Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.
Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
See details

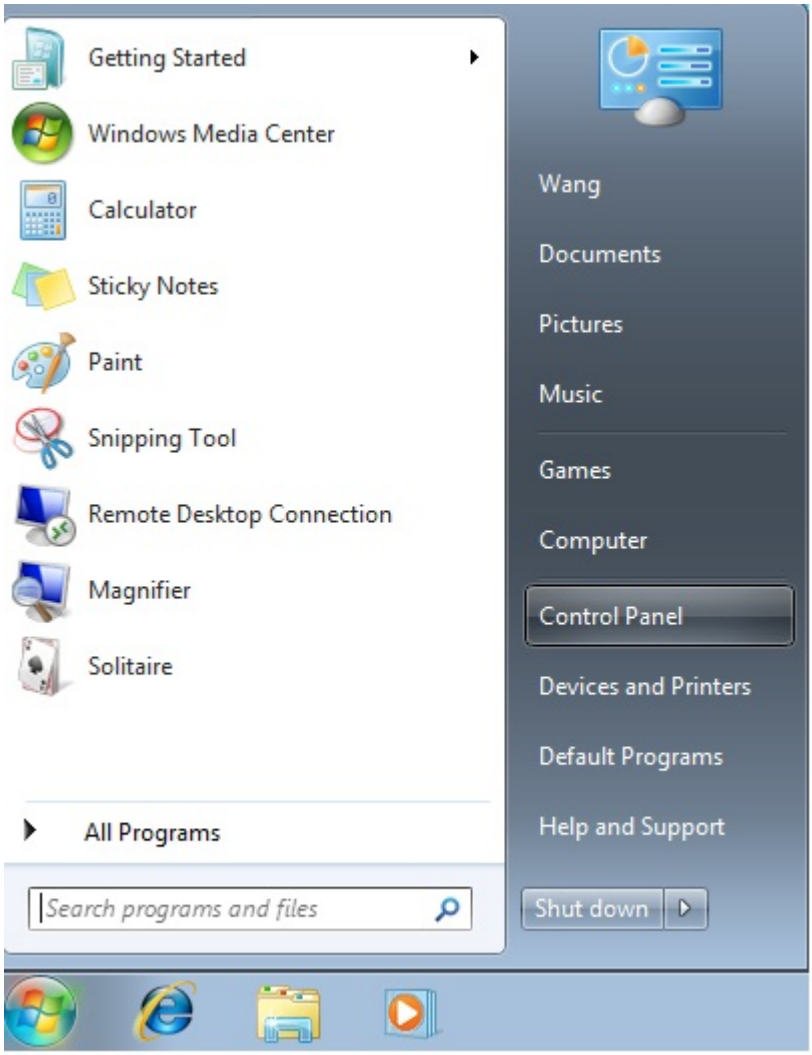
Press **Install this driver software anyway** to Continue


Found New Hardware - USB2.0 Device
The software for this device has been successfully installed
Windows has finished installing the driver software for this device:
USB2.0 Device
Close

Completing install

Windows 7 USB driver installation

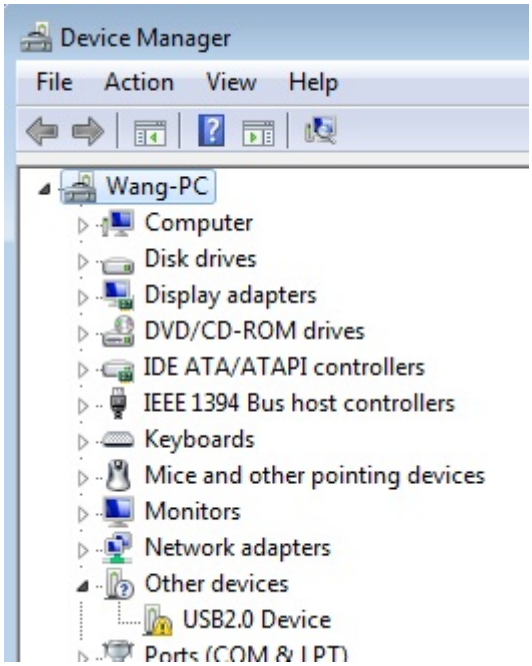
First at all, Choose System and Security from Control Panel as following:


Getting Started
Windows Media Center
Calculator
Sticky Notes
Paint
Snipping Tool
Remote Desktop Connection
Magnifier
Solitaire
All Programs
Search programs and files
Wang
Documents
Pictures
Music
Games
Computer
Control Panel
Devices and Printers
Default Programs
Help and Support
Shut down

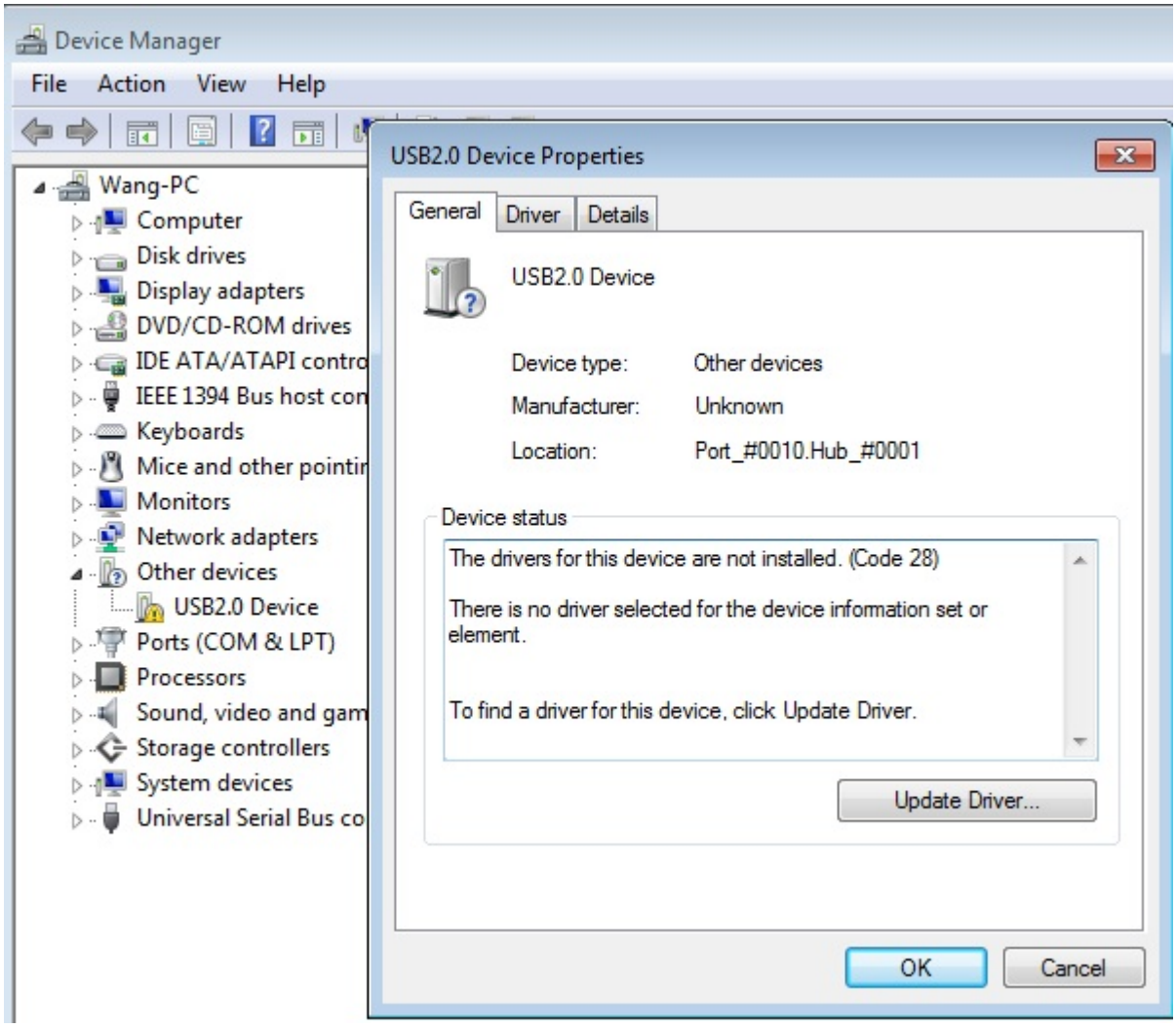
Control Panel
Adjust your computer's settings
System and Security
Review your computer's status
Back up your computer
Find and fix problems
Network and Internet
Connect to the Internet
View network status and tasks
Choose homegroup and sharing options
Hardware and Sound
View devices and printers
Add a device
Programs
Uninstall a program

Choose Device Manager from System as following:

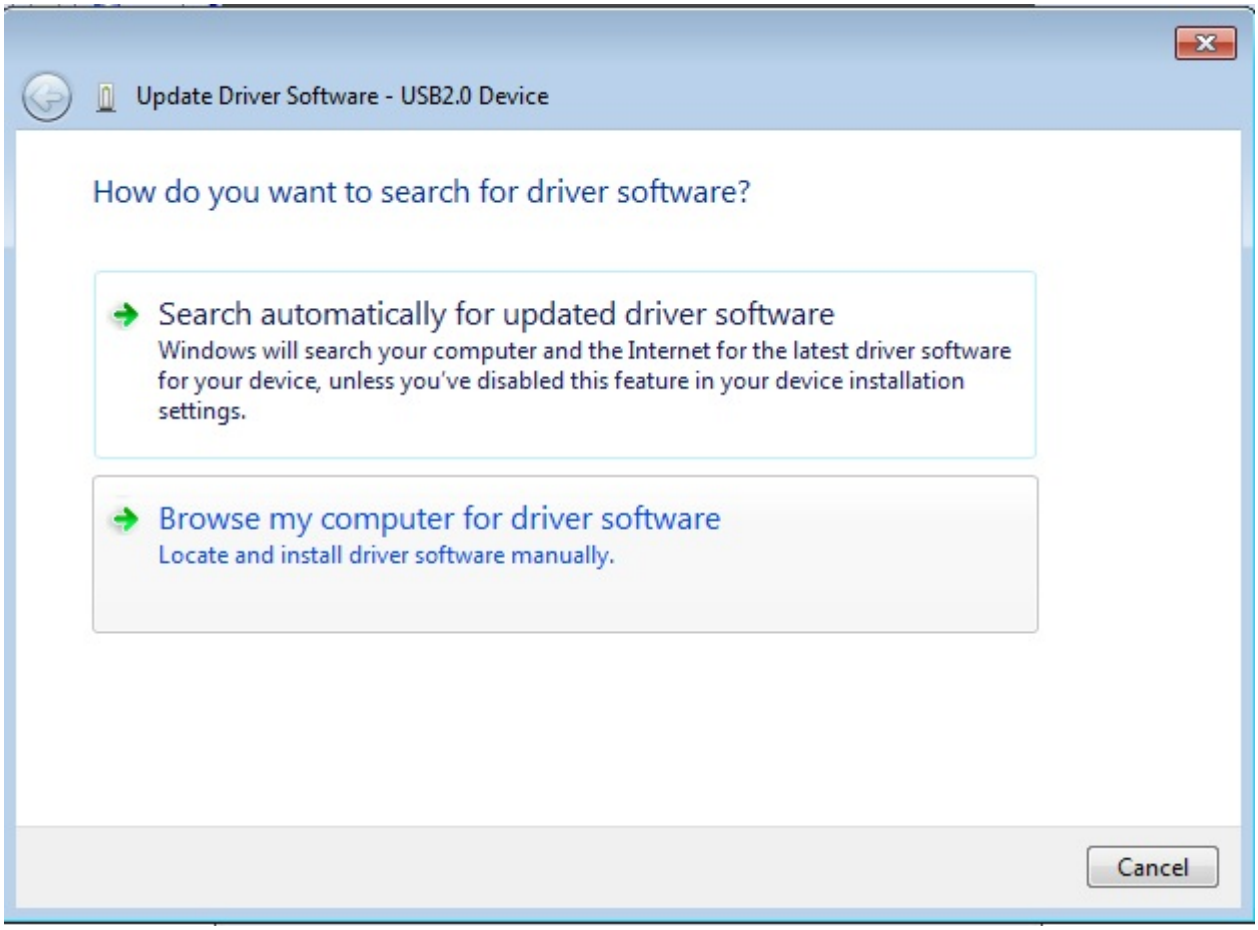
You will find out "other devices" has show device as following:
LA-5000 show USB2.0 Device.
LA-2132 show LA2132 Device.
DSO-29xxA/B show DSO2900A/B Device.
DSO50x12, PG32x00 show "Unknow Device" (still can install).



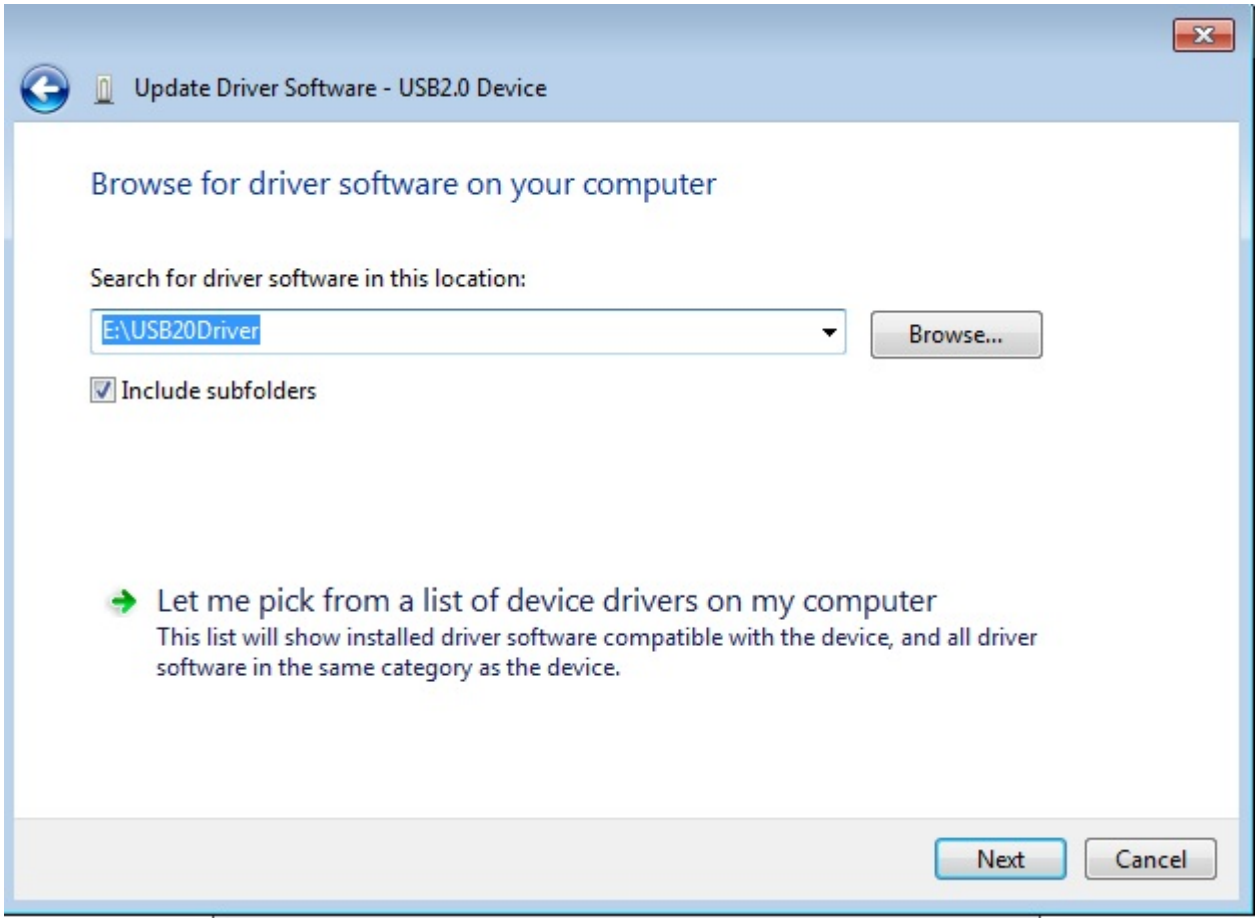
Choose Update Driver



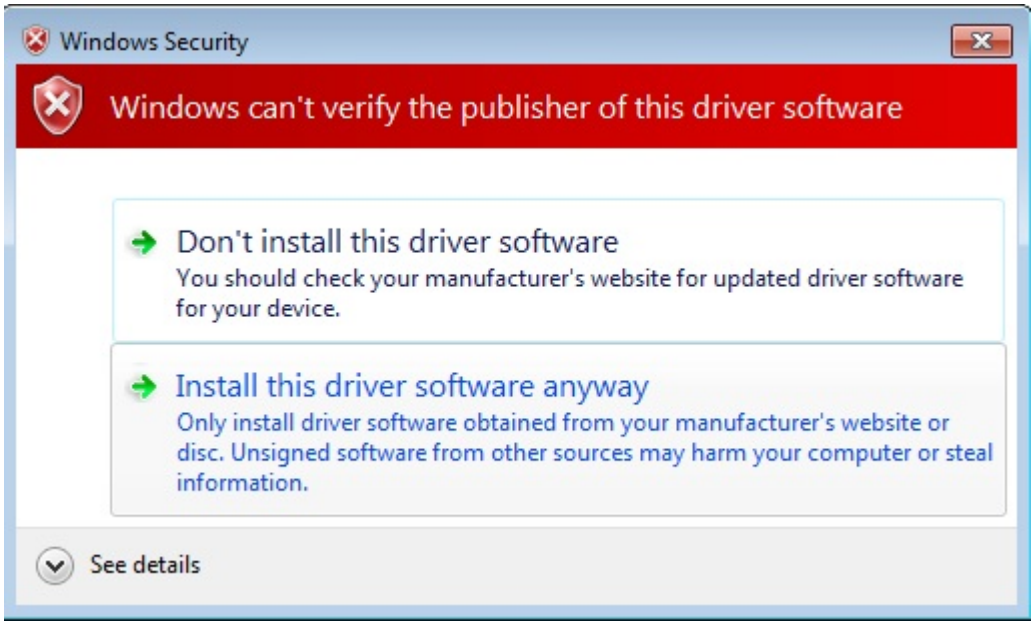
Press **Browse my computer for driver software** Continue Anyway

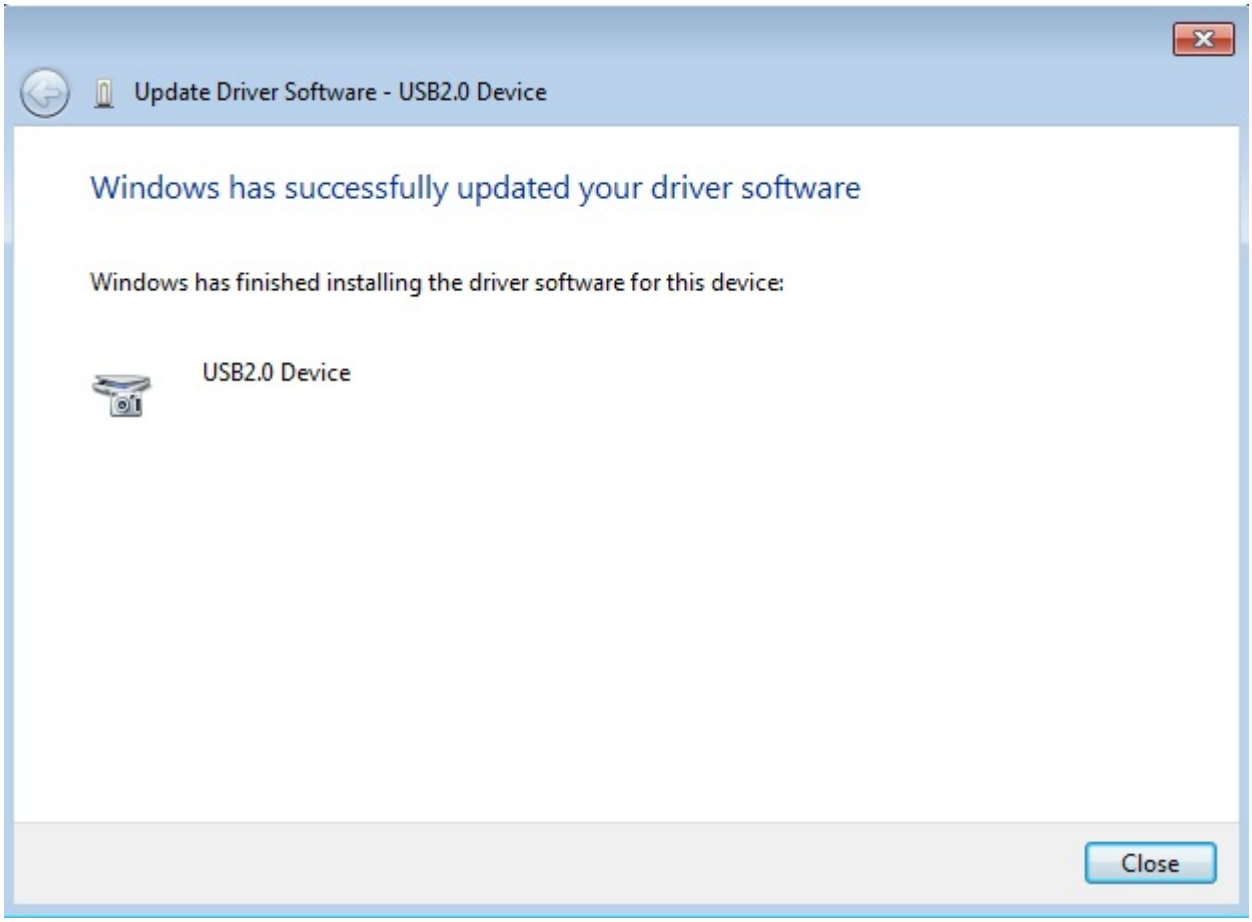

Update Driver Software - USB2.0 Device
How do you want to search for driver software?
Search automatically for updated driver software
Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.
Browse my computer for driver software
Locate and install driver software manually.
Cancel

Browse to E:\USB20Driver from CD. "E:" is CD driver.


Update Driver Software - USB2.0 Device
Browse for driver software on your computer
Search for driver software in this location:
E:\USB20Driver
Browse...
Include subfolders
Let me pick from a list of device drivers on my computer
This list will show installed driver software compatible with the device, and all driver software in the same category as the device.
Next
Cancel

Choose "Install this driver software anyway".


Windows Security
Windows can't verify the publisher of this driver software
Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.
Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
See details


Update Driver Software - USB2.0 Device
Windows has successfully updated your driver software
Windows has finished installing the driver software for this device:
USB2.0 Device
Close

Installing is completed.

Technical Support

Technical Support

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